

Figure 1(a)

(b)



Figure 1(b)

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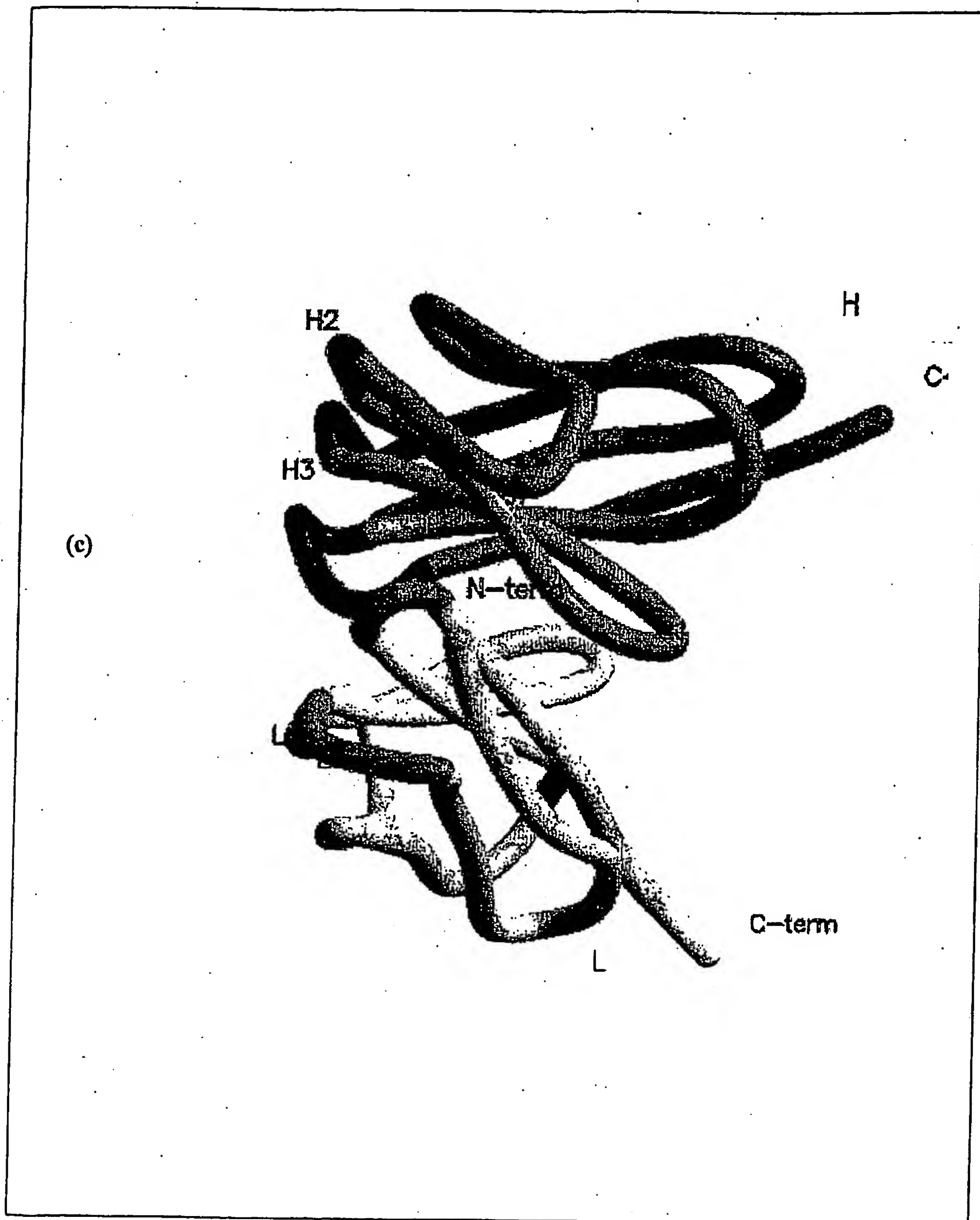


Figure 1(c)

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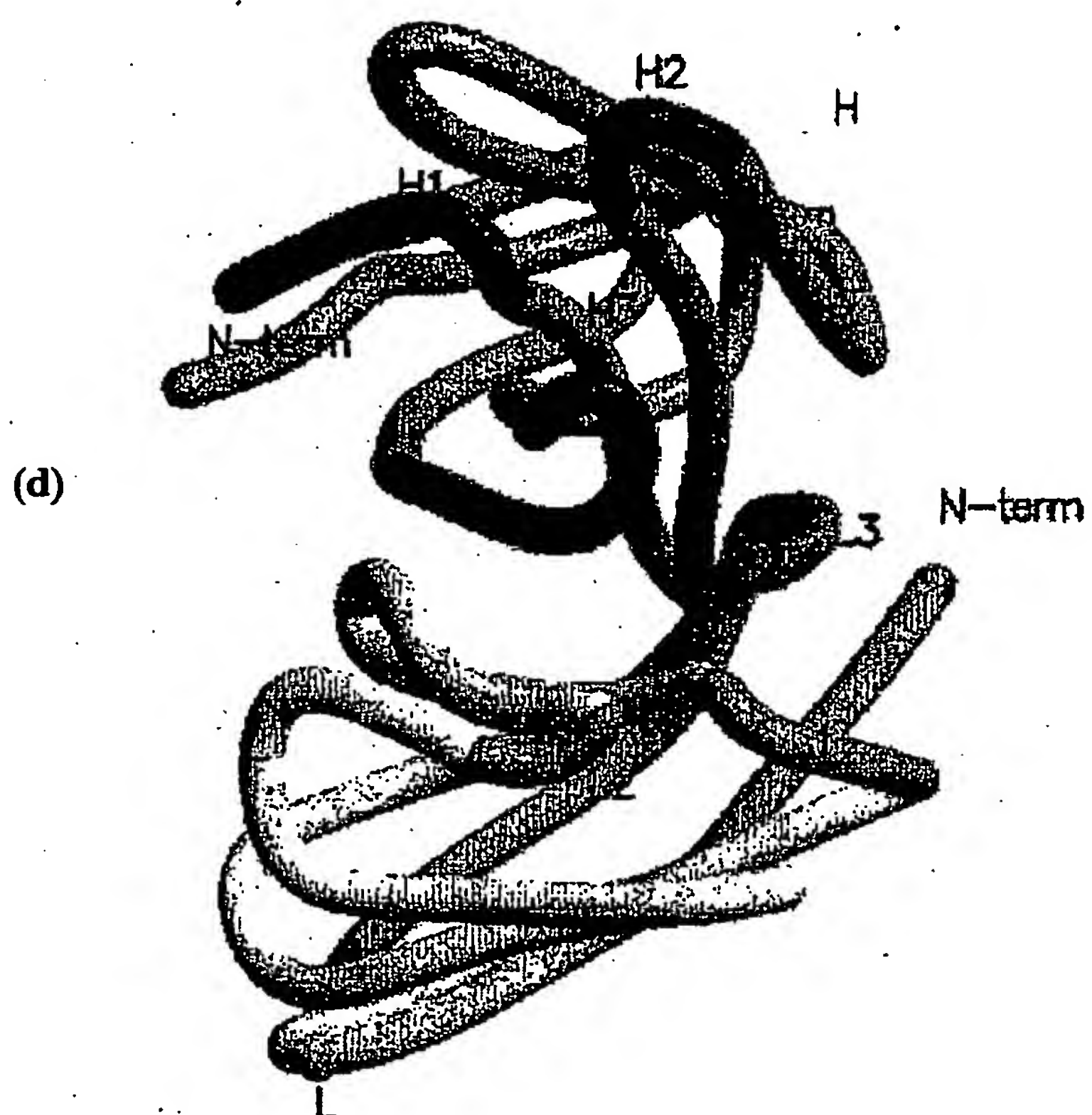


Figure 1(d)

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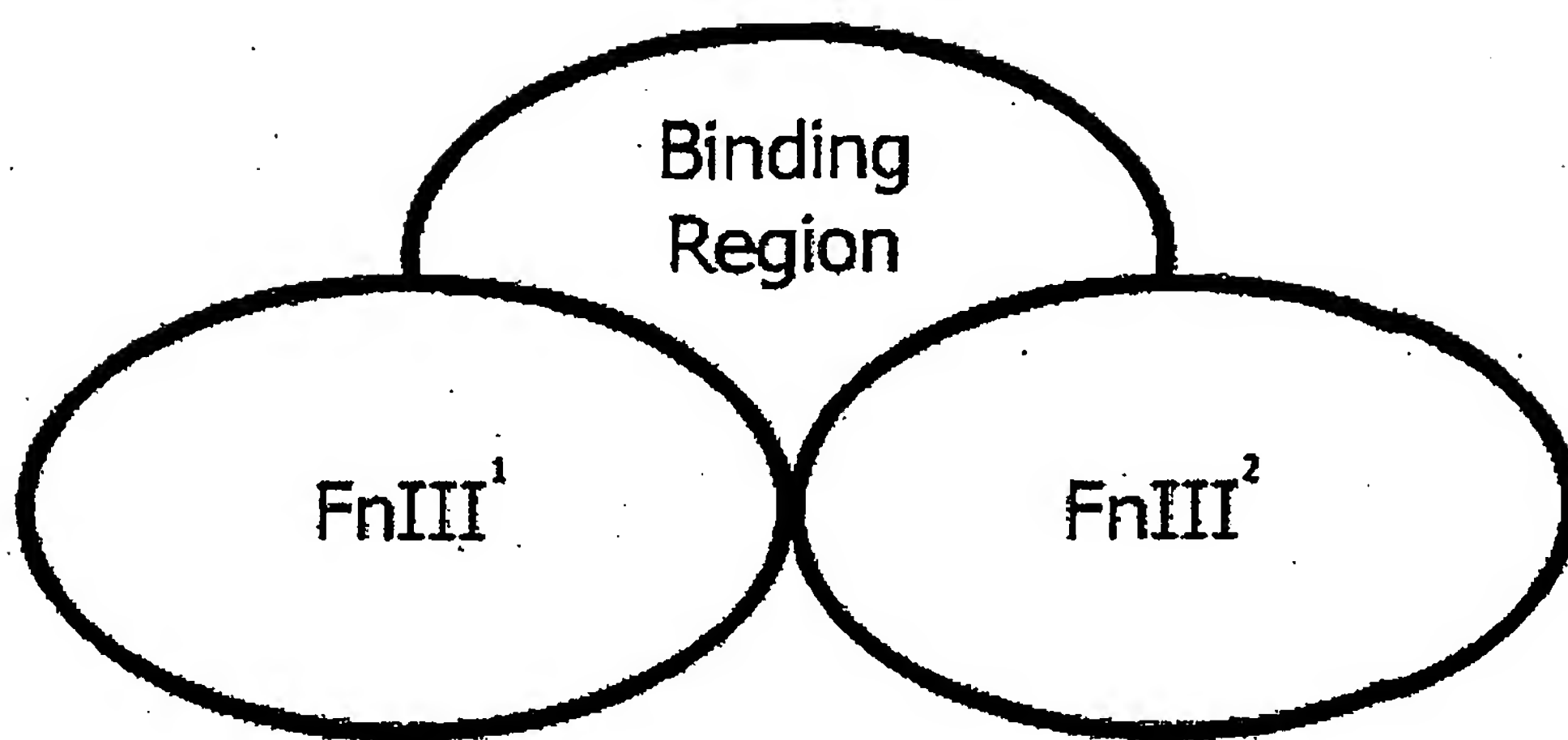


Figure 1A

BEST AVAILABLE COPY

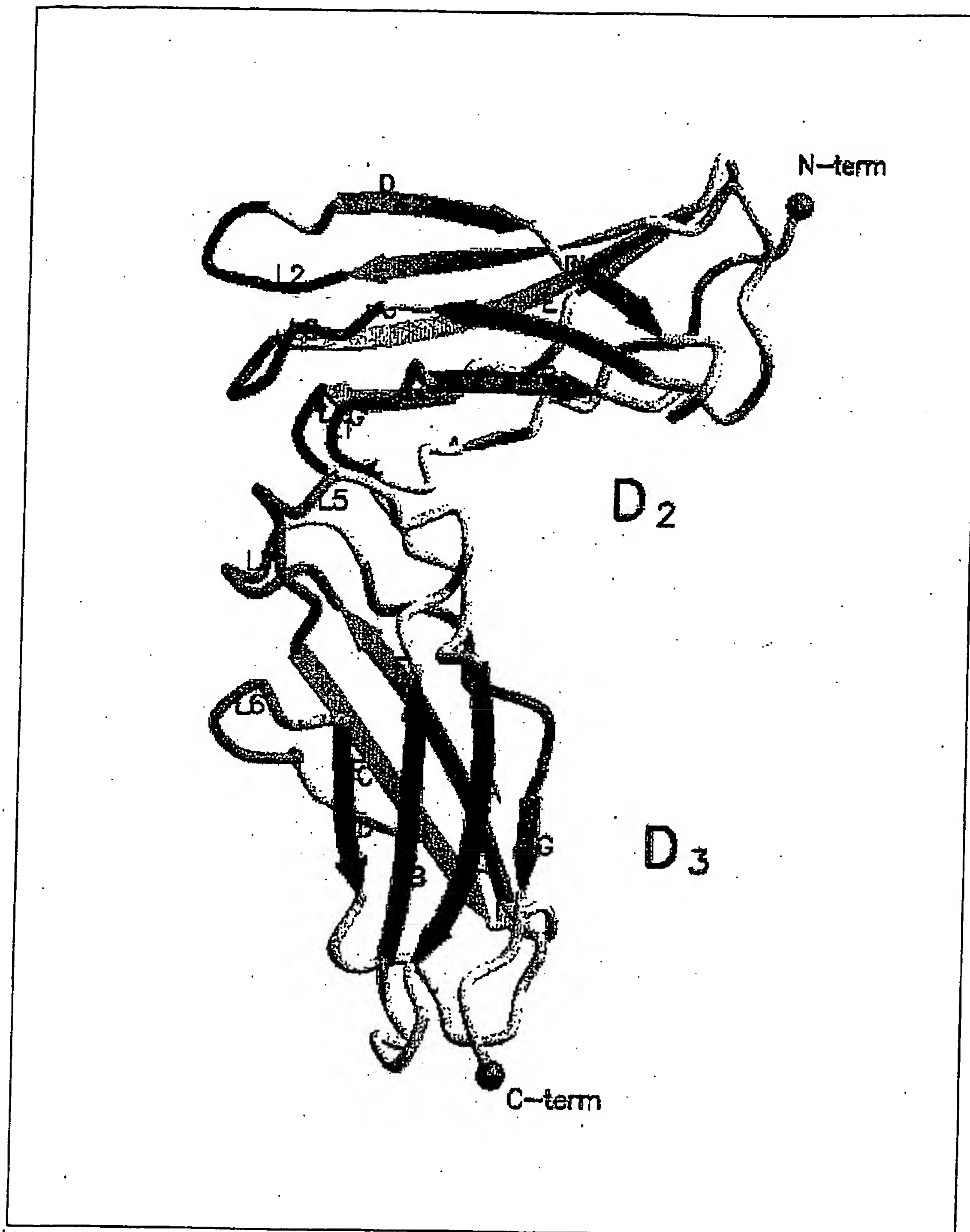


Figure 2(a)

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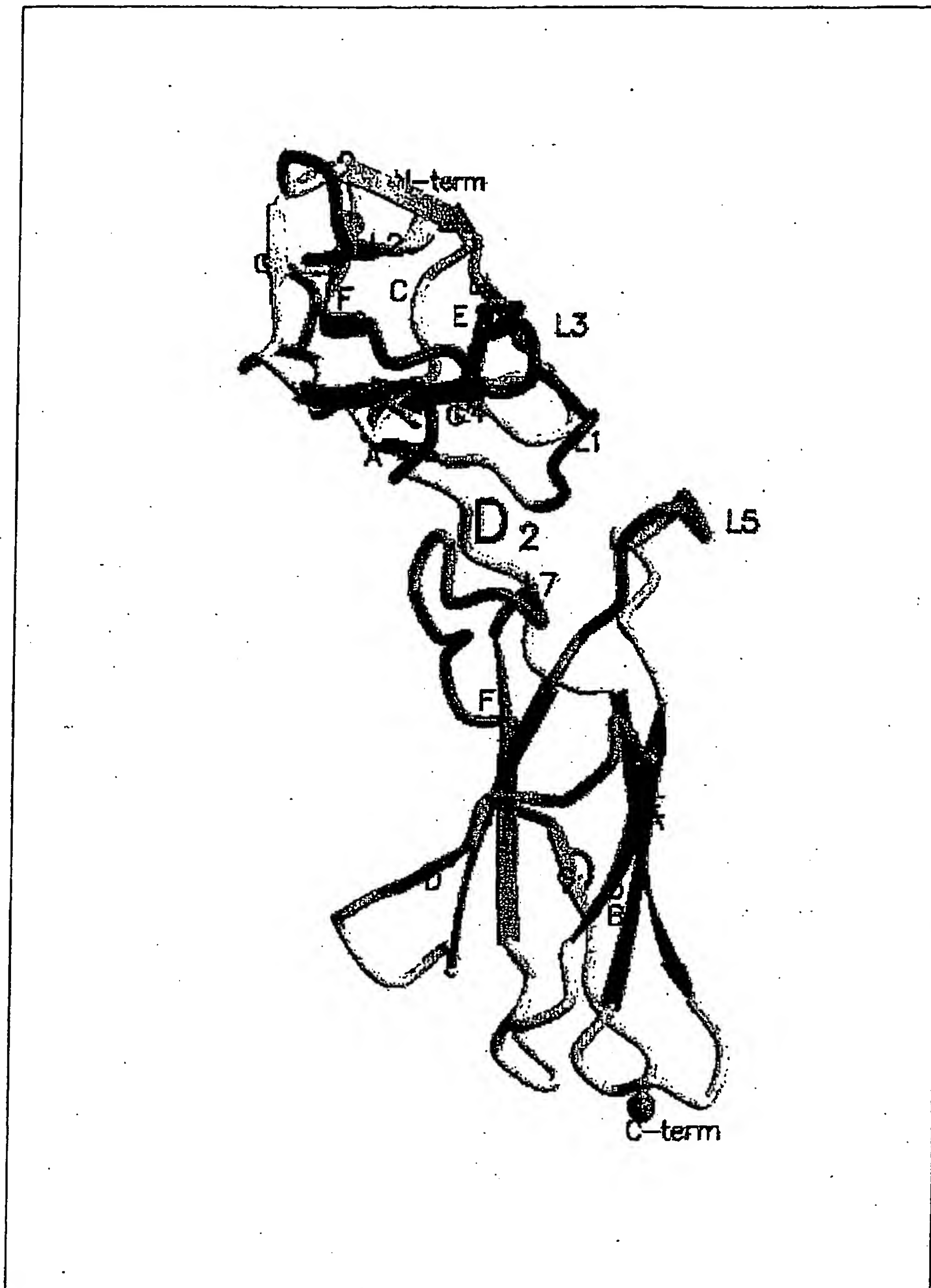


Figure 2(b)

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50

100

A#

150

##

B#####

C#####

D, D' #####

* * * * *

* * * * *

L1

L2

200

E#####

F##### G##### G'#####

A#

* * * * *

* * * * *

L3

L4

250

#####

B#####

C# # # # # # # #

D####

* * * * *

* *

L5.

300

E# # # # #

F#####

G###

* * * * *

L6

L7

320

5

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Approximate positioning of each loop in four of the cytokine receptor family members. The loop positions could vary up to 3 amino acids either side of the box. For example Loop 6 of the prolactin receptor is defined as GQQTEF and not FAQQ as depicted here.

IL6RPRRLRL	-----	VPPEEPQ-LSCFSPNK-ETFEVCEWGPRSTPSLTTK
P08887 IL6A_HUMAN	LHDSGNYSCY-RAGRPAGTVHLLV	VPPEEPQ-LSCFRKSPLSNVVCEWGPRSTPSLTTK
Q14626 I11R_HUMAN	STDEGTIYCQTLTGALGGTVTLQL	YPPARPV-VSCQADY-ENFSCTWSPSQISGLPTR
P16471 PRLR_HUMAN	MKENVASATVFTLLFLNLTCLNG	LPPGKPEIFKCRSPNK-ETFTCWWRPGTDGGLPTN
Q99062 GCSR_HUMAN	-AFLSCCLNWGNSLQILDQVELRA	YPPAIPHNLSCLMNLTTSSLICQWEPGPETHLPTS
IL6RPRRLRL	AVLLVHRE-----	GETLMFQEPQYSQESQKFSCHFSGKQYTSMWRTYIVSMSVASS
P08887 IL6A_HUMAN	AVLLVRKFQ-----	SHAEDFQEPQYSQESQKFSCHLAVPEGD-SSFYIVSMCVASS
Q14626 I11R_HUMAN	YLTSYRKKTVLGADSQRRSPSTGPWPQD-PLGAARCVVHGAEFW--	SQYRINVTEVNP
P16471 PRLR_HUMAN	YSLTYHRE-----	GETLMHECPDYITGGPNSCHFSGKQYTSMWRTYIMMVNATNQ
Q99062 GCSR_HUMAN	FTLKSFKSRNC-----	QTQGSILDCVPK-DGQSHCCIPRKHLLLYQNMGIWVQAENAL
IL6RPRRLRL	VGSKFSDELYVDVTYILQPDPPANITVTAVA-RNPR---	WLSVTWQDPHLIDLK-TGWFT
P08887 IL6A_HUMAN	VGSKFSKTQTFQCGIILQPDPPANITVTAVA-RNPR---	WLSVTWQDPHSWNSS---FYR
Q14626 I11R_HUMAN	-LGASTRLLDVSLQSIILRPDPQGLRVESVP-GYPR---	RLRASWTYPASWECQ--PHFL
P16471 PRLR_HUMAN	MGSSFSDELYVDVTYIVQPDPPLELAVEVKQ-PEDR-KPYLWIKWSPPTLIDLK-TGWFT	
Q99062 GCSR_HUMAN	GTSMSPTLCLDPMDDVKLEPPMLRTMDPSPEAAPQAGCLQLCWEPWQPGIHNOKCEL	
IL6RPRRLRL	LRFELRYRAERSKTFTTWFAQ-QQHHSVIHDAWSGLRHVVQLRAKPD--	HGYWSEWSPEA
P08887 IL6A_HUMAN	LRFELRYRAERSKTFTTWMVKDLQHHCVIHDAWSGLRHVVQLRAQEEFGQGEWSEWSPEA	
Q14626 I11R_HUMAN	LKFRLOQYRPAQHPAWSTVEPAG--	LEEVIDAVAGLPHAVRVSARDFLDAGTWSTWSPEA
P16471 PRLR_HUMAN	LLYEIRLKPEKAAEWEIHFAQ-QTEFKILSLHPGQKYLQVRCQPD--	HGYWSAWSPAT
Q99062 GCSR_HUMAN	RHKPQORGEASWALVGPLPLEAL-QYELCGLLP--	ATAYTLQIRCIWPLPQSHWSDWSPSL
IL6RPRRLRL	MGTPWTE -----	
P08887 IL6A_HUMAN	MGTPWTE RSPPAENEVST-----	PMQALTTN---KDDDNILFRDSANATSLPVQ
Q14626 I11R_HUMAN	WGTPSTG IPKEIPAWGQL-----	HTQPEVEP---QVDSAPP RPSPSLQPHPRLLD
P16471 PRLR_HUMAN	FIQIPSD TMNDTTVWISVAVLSAVICLIIVWAVALKGYSMTVCIFPPVPGPKIKGFDAH	
Q99062 GCSR_HUMAN	ELRTTER PTVRLDTWWRQR-QLDPRTVQLFWKPVPLEEDSGRIQGYVVS-WRPSGQAGA	

Figure 3A

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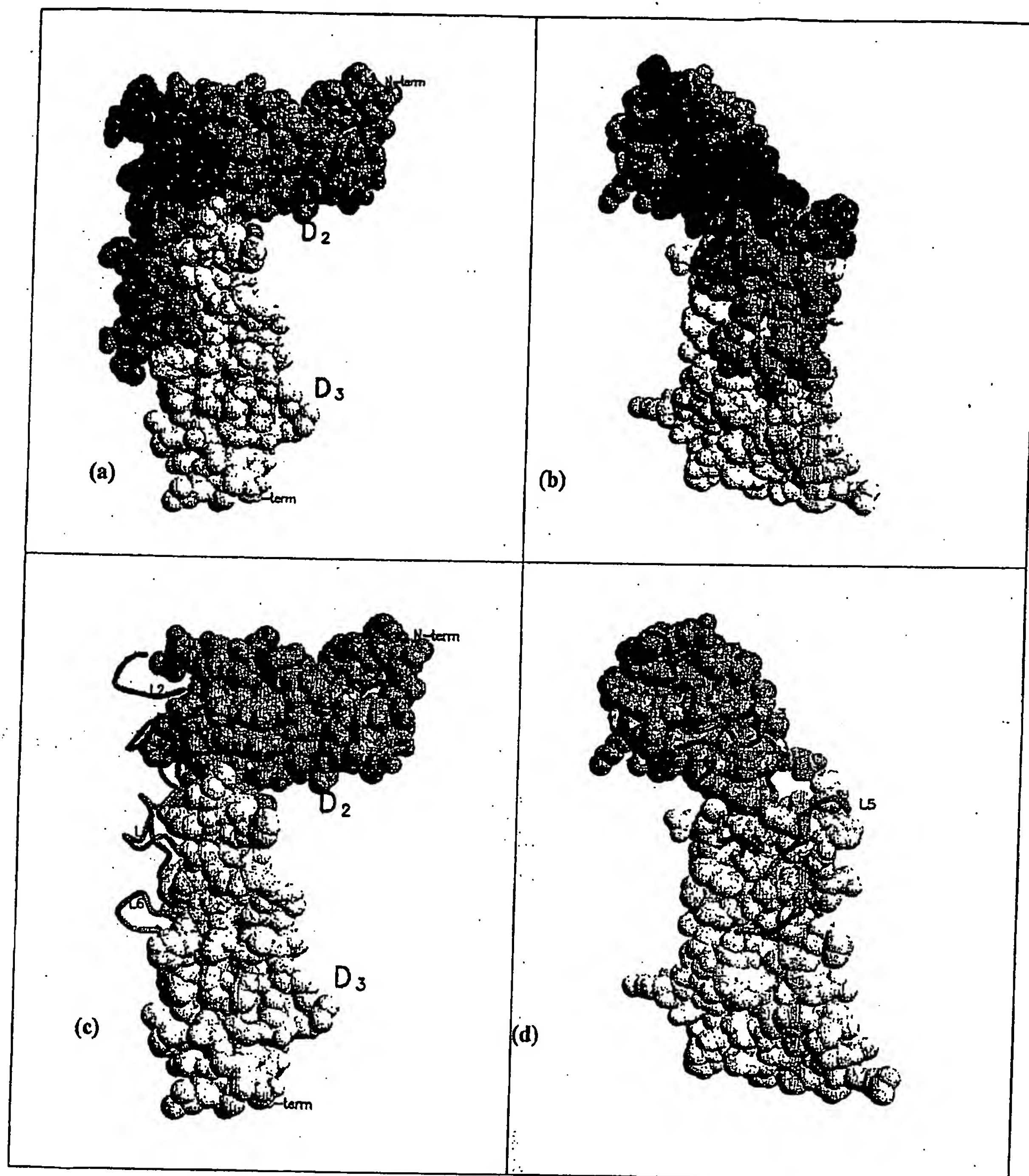


Figure 4

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mGCSF_122-334	YKASH-SM	SCASH	YKASH-SM	SCASH
hGCSF_121-333	YKASH-SM	SCASH	YKASH-SM	SCASH
hcommBR_26-240	ETV-RT	RCNDY	ETV-RT	RCNDY
mcommBR_30-243	ETV-RT	RCNDY	ETV-RT	RCNDY
mIL3BR_30-244	ETV-RT	RCNDY	ETV-RT	RCNDY
hcommBR_240-439	DEACH-ON	RCVDE	DEACH-ON	RCVDE
mcommBR_243-442	CDKAO-ON	RCVDE	CDKAO-ON	RCVDE
mIL3BR_244-441	CDKAO-ON	RCVDE	CDKAO-ON	RCVDE
hgp130_124-325	LDEK-KN	SCVNE	LDEK-KN	SCVNE
hgp130_124-323	FMDK-KN	SCVNE	FMDK-KN	SCVNE
hGHR_46-262	NSKE-K	RCVNE	NSKE-K	RCVNE
hGHR_46-271	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL12p40_122-328	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL12p40_119-332	SSKE-K	RCVNE	SSKE-K	RCVNE
hEPOR_39-247	SSKE-K	RCVNE	SSKE-K	RCVNE
hEPOR_39-246	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL6R_112-317	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL4R_108-313	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL4R_24-224	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL4R_24-225	SSKE-K	RCVNE	SSKE-K	RCVNE
hPRIR_24-229	SSKE-K	RCVNE	SSKE-K	RCVNE
hPRIR_19-224	SSKE-K	RCVNE	SSKE-K	RCVNE
hCRLF1_133-342	SSKE-K	RCVNE	SSKE-K	RCVNE
hCRLF1_136-345	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL12B2R_122-320	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL12B2R_135-336	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL11R_111-318	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL11RA1_111-318	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL11RA2_111-318	SSKE-K	RCVNE	SSKE-K	RCVNE
hCNTFR_107-317	SSKE-K	RCVNE	SSKE-K	RCVNE
hCNTFR_107-317	SSKE-K	RCVNE	SSKE-K	RCVNE
hCR_23-229	SSKE-K	RCVNE	SSKE-K	RCVNE
hCR_23-228	SSKE-K	RCVNE	SSKE-K	RCVNE
hthromboR_27-285	SSKE-K	RCVNE	SSKE-K	RCVNE
hthromboR_27-277	SSKE-K	RCVNE	SSKE-K	RCVNE
hloptinR_429-638	SSKE-K	RCVNE	SSKE-K	RCVNE
hloptinR_427-636	SSKE-K	RCVNE	SSKE-K	RCVNE
hloptinR_124-332	SSKE-K	RCVNE	SSKE-K	RCVNE
hloptinR_124-330	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL21R_17-229	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL21R_17-229	SSKE-K	RCVNE	SSKE-K	RCVNE
hthromboR_285-490	SSKE-K	RCVNE	SSKE-K	RCVNE
hthromboR_277-481	SSKE-K	RCVNE	SSKE-K	RCVNE
hwsx1_34-232	SSKE-K	RCVNE	SSKE-K	RCVNE
hwsx1_29-226	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL2BR_30-235	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL2BR_30-236	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL9R_48-261	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL9R_47-261	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL12B1R_42-234	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL12B1R_43-256	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL13A1R_123-337	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL13A1R_121-333	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL13A2R_134-333	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL13A2R_128-327	SSKE-K	RCVNE	SSKE-K	RCVNE
hILSR_123-332	SSKE-K	RCVNE	SSKE-K	RCVNE
hILSR_120-329	SSKE-K	RCVNE	SSKE-K	RCVNE
hGMCSPR_115-348	SSKE-K	RCVNE	SSKE-K	RCVNE
hGMCSPR_124-352	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL3R_100-292	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL3R_113-322	SSKE-K	RCVNE	SSKE-K	RCVNE
hcommGR_39-253	SSKE-K	RCVNE	SSKE-K	RCVNE
mcommGR_39-254	SSKE-K	RCVNE	SSKE-K	RCVNE
hTSLPR_30-216	SSKE-K	RCVNE	SSKE-K	RCVNE
hTSLPR_27-217	SSKE-K	RCVNE	SSKE-K	RCVNE
hLIFR_48-246	SSKE-K	RCVNE	SSKE-K	RCVNE
hLIFR_47-241	SSKE-K	RCVNE	SSKE-K	RCVNE
hLIFR_391-534	SSKE-K	RCVNE	SSKE-K	RCVNE
hLIFR_326-529	SSKE-K	RCVNE	SSKE-K	RCVNE
hOSMR_28-140	SSKE-K	RCVNE	SSKE-K	RCVNE
hOSMR_25-139	SSKE-K	RCVNE	SSKE-K	RCVNE
hOSMR_239-429	SSKE-K	RCVNE	SSKE-K	RCVNE
hOSMR_232-426	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL7R_28-236	SSKE-K	RCVNE	SSKE-K	RCVNE
hIL7R_28-236	SSKE-K	RCVNE	SSKE-K	RCVNE
domacyt1_115-330	SSKE-K	RCVNE	SSKE-K	RCVNE
domacyt2_176-391	SSKE-K	RCVNE	SSKE-K	RCVNE
consensus	SSKE-K	RCVNE	SSKE-K	RCVNE
hGLMR	SSKE-K	RCVNE	SSKE-K	RCVNE
hGLMR	SSKE-K	RCVNE	SSKE-K	RCVNE
mChirica_cedric	SSKE-K	RCVNE	SSKE-K	RCVNE
hChirica	SSKE-K	RCVNE	SSKE-K	RCVNE
ruler 1.....10.....20.....30.....40.....50.....	SSKE-K	RCVNE	SSKE-K	RCVNE

Figure 5A

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Figure 5A (cont)

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KHLLLYQYNA	SSSEKLC	DDMD	KBERN	DOLOISDVA	122
KHLLLYQYNA	SSSEKLC	DDMD	KBERN	DOLOISDVA	123
QSFVVTDVDY	QDR	LTALTVT	T	Q	120
TRFSITHEDY	TRDS	DLTQLM	TRACH	Q	119
TRFSITHEDY	TRDS	DLTQLM	TRACH	Q	120
EDATRHOIS	Q	RAEKH	RSSVN	Q	112
ESASASQ	TS	Q	Q	Q	113
ESASASQ	TS	Q	Q	Q	112
STVYFVN	R	RENA	KVTS	DHIN	114
MTYTYVM	R	RENA	KVSS	SSIN	112
BFTSINI	Q	THN	TVDER	S	119
SKTSINI	Q	THN	TVDER	S	127
PAEESL	R	Q	Q	Q	126
ETAEETL	R	Q	Q	Q	128
ADTSSSV	R	Q	Q	Q	121
ADTSSSV	R	Q	Q	Q	120
EDDSST	TS	Q	Q	Q	119
LEEDKVI	TS	Q	Q	Q	120
DDVVSADN	TS	Q	Q	Q	113
REVQSDR	TS	Q	Q	Q	114
QYTSMWRT	TS	Q	Q	Q	119
QYTSMWRT	TS	Q	Q	Q	118
DLALFT	TS	Q	Q	Q	116
DLALFT	TS	Q	Q	Q	116
ESSES	TS	Q	Q	Q	117
DLAESR	TS	Q	Q	Q	120
AEFWSO	TS	Q	Q	Q	123
AEFWSO	TS	Q	Q	Q	123
AEFWSO	TS	Q	Q	Q	123
MHLFSTIK	TS	Q	Q	Q	112
MHLFSTIK	TS	Q	Q	Q	112
VQLFSMA	TS	Q	Q	Q	121
VHLFSTV	TS	Q	Q	Q	118
QEEVRL	TS	Q	Q	Q	121
QEEVRL	TS	Q	Q	Q	121
IFLLS	TS	Q	Q	Q	122
IFLLS	TS	Q	Q	Q	123
TAKLNDT	TS	Q	Q	Q	127
RAKLYA	TS	Q	Q	Q	126
PHFMADD	TS	Q	Q	Q	115
QFLSDEV	TS	Q	Q	Q	115
RNDSIH	TS	Q	Q	Q	119
RNDSVI	TS	Q	Q	Q	118
EQLTMSD	TS	Q	Q	Q	110
EQFTMA	TS	Q	Q	Q	111
QKLTVD	TS	Q	Q	Q	116
QSLTSVD	TS	Q	Q	Q	117
DNFTIT	TS	Q	Q	Q	119
DNFTIT	TS	Q	Q	Q	113
VSVLYT	TS	Q	Q	Q	112
QIIVLS	TS	Q	Q	Q	120
VKDSFE	TS	Q	Q	Q	118
VERSEF	TS	Q	Q	Q	118
LEADYK	TS	Q	Q	Q	118
LDSSOY	TS	Q	Q	Q	118
ILSKGR	TS	Q	Q	Q	129
INSKFE	TS	Q	Q	Q	130
LSLTSR	TS	Q	Q	Q	117
LSLTSR	TS	Q	Q	Q	117
RLSSSQ	TS	Q	Q	Q	123
NSDLVE	TS	Q	Q	Q	137
KEIALY	TS	Q	Q	Q	130
EDIQY	TS	Q	Q	Q	130
QDDI	TS	Q	Q	Q	103
AROSLE	TS	Q	Q	Q	105
LSHGD	TS	Q	Q	Q	103
LSHGD	TS	Q	Q	Q	99
LENQEI	TS	Q	Q	Q	117
QOEI	TS	Q	Q	Q	117
LAERL	TS	Q	Q	Q	21
LEEL	TS	Q	Q	Q	21
CSQET	TS	Q	Q	Q	113
CSQET	TS	Q	Q	Q	113
KQFL	TS	Q	Q	Q	117
SEFL	TS	Q	Q	Q	117
YKRFSE	TS	Q	Q	Q	125
MSRABE	TS	Q	Q	Q	125
DLSTS	TS	Q	Q	Q	118
RITLED	TS	Q	Q	Q	118
DLCS	TS	Q	Q	Q	110
LOSRL	TS	Q	Q	Q	114
LOSRL	TS	Q	Q	Q	114

Figure 5A (cont)

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190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

Figure 5B

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NTSC...
SKPC...
SNFO...
LQNAHS...
LDRAHS...
RVNS...
DTASTRSS...
DTMSRTS...
LTTS...
IWLTYC...
DKTS...
OKE...
ILE...
ERT...
VED...
VAC...
VTY...
VTY...
OQTE...
CHOT...
VSNQTS...
VSNQTS...
AK...
AK...
ALEEV...
ILEEV...
ILEEV...
DTAST...
DTAST...
LEATS...
LEATS...
DAK...
DAK...
ATS...
ATS...
VDSRS...
VDSRS...
LGAR...
LGAR...
ILTE...
DELTE...
ORQ...
VTW...
VTW...
DTES...
DIE...
FERN...
SDRN...
ET...
MKL...
AFIS...
KFIS...
DLEN...
REAR...
TS...
HRO...
HRO...
CN...
ECC...
SKD...
SKD...
AVENSE...
AED...
VUK...
VUK...
LE...
AN...
SK...
TR...
LT...
AV...
AT...
RK...
CK...
FTY...
FTY...

240... 250... 260... 270... 280... 290...

Figure 5B (cont)

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[illegible]

Figure 5B (cont)

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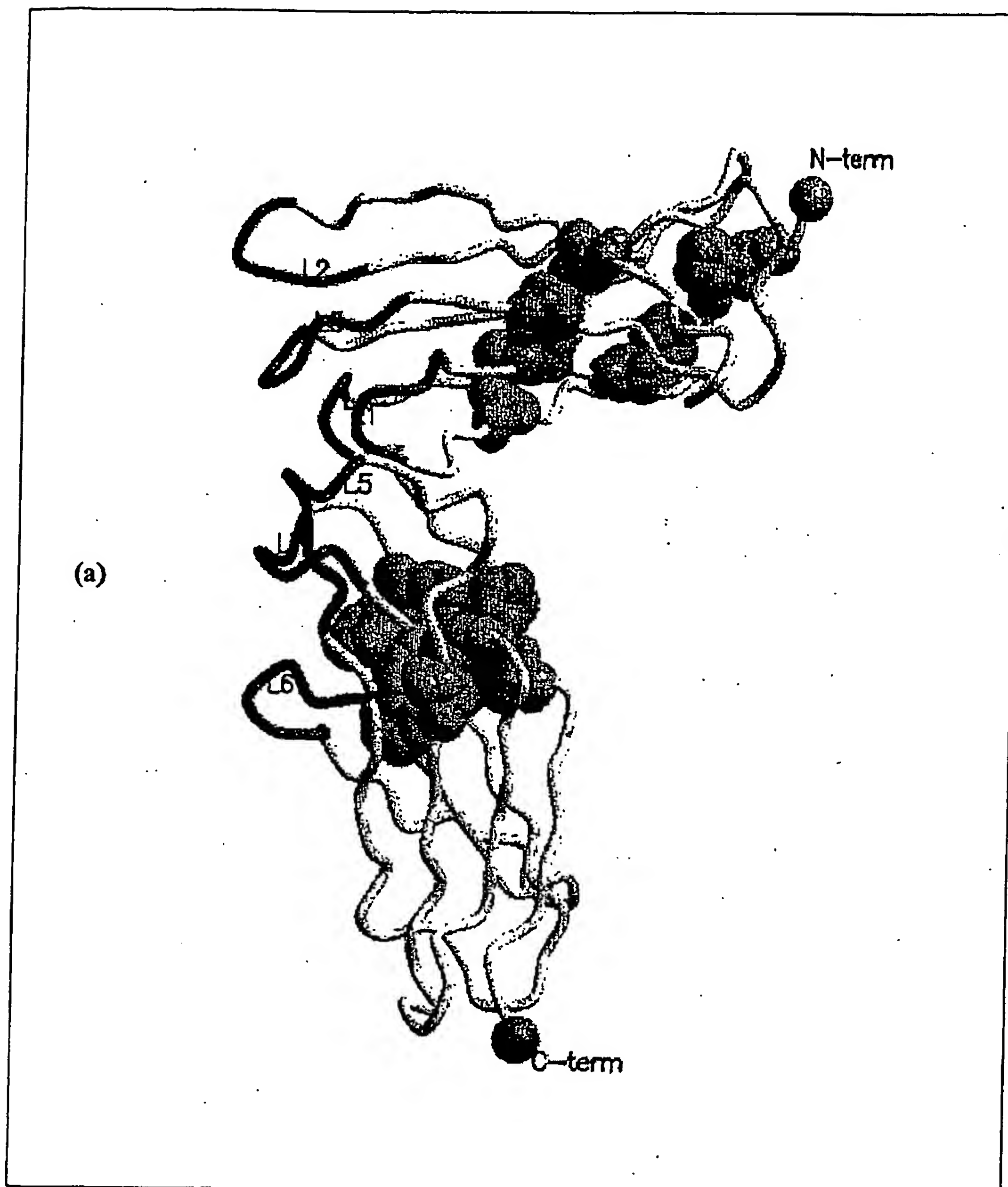


Figure 6(a)

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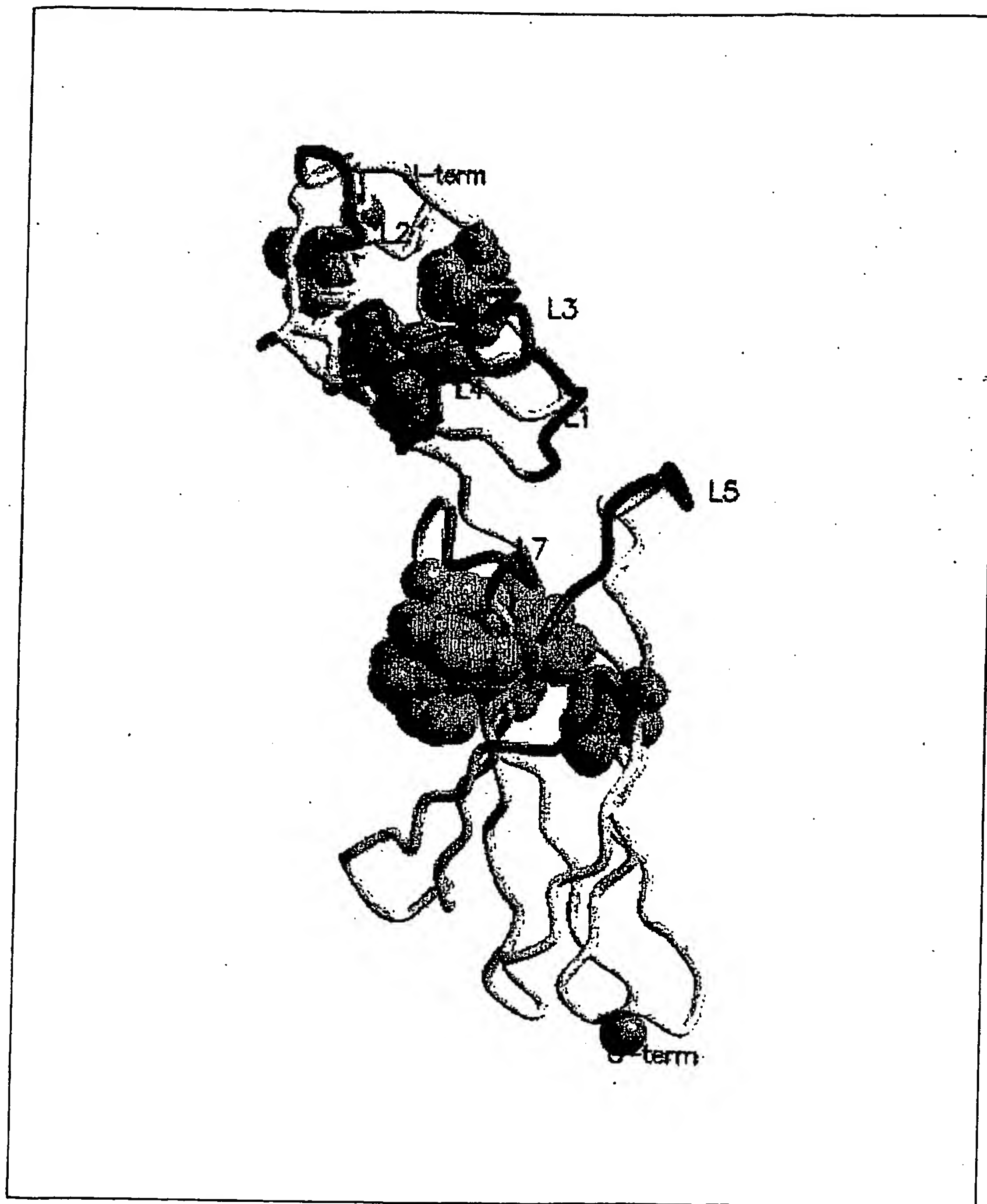


Figure 6(b)

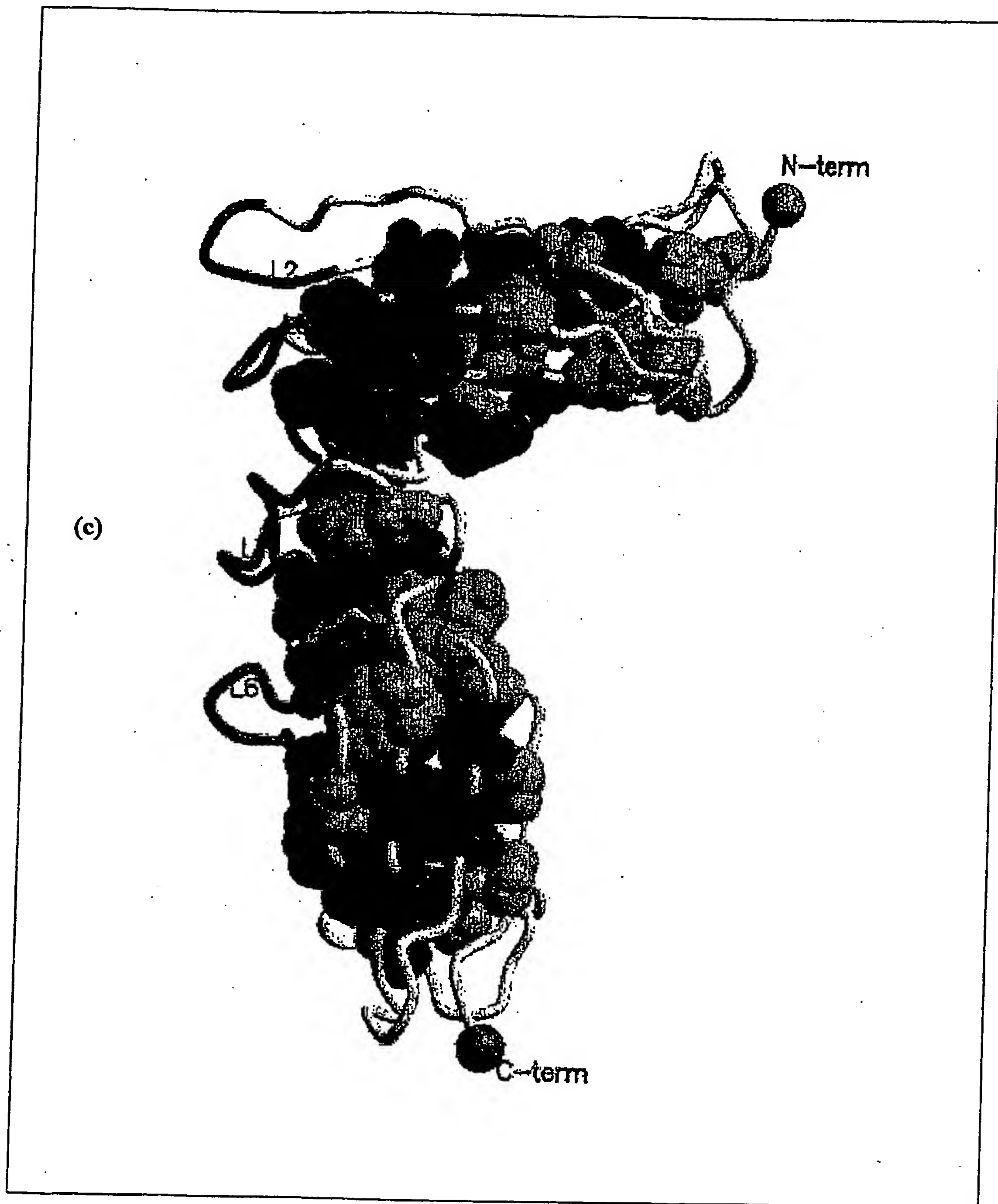


Figure 6(c)

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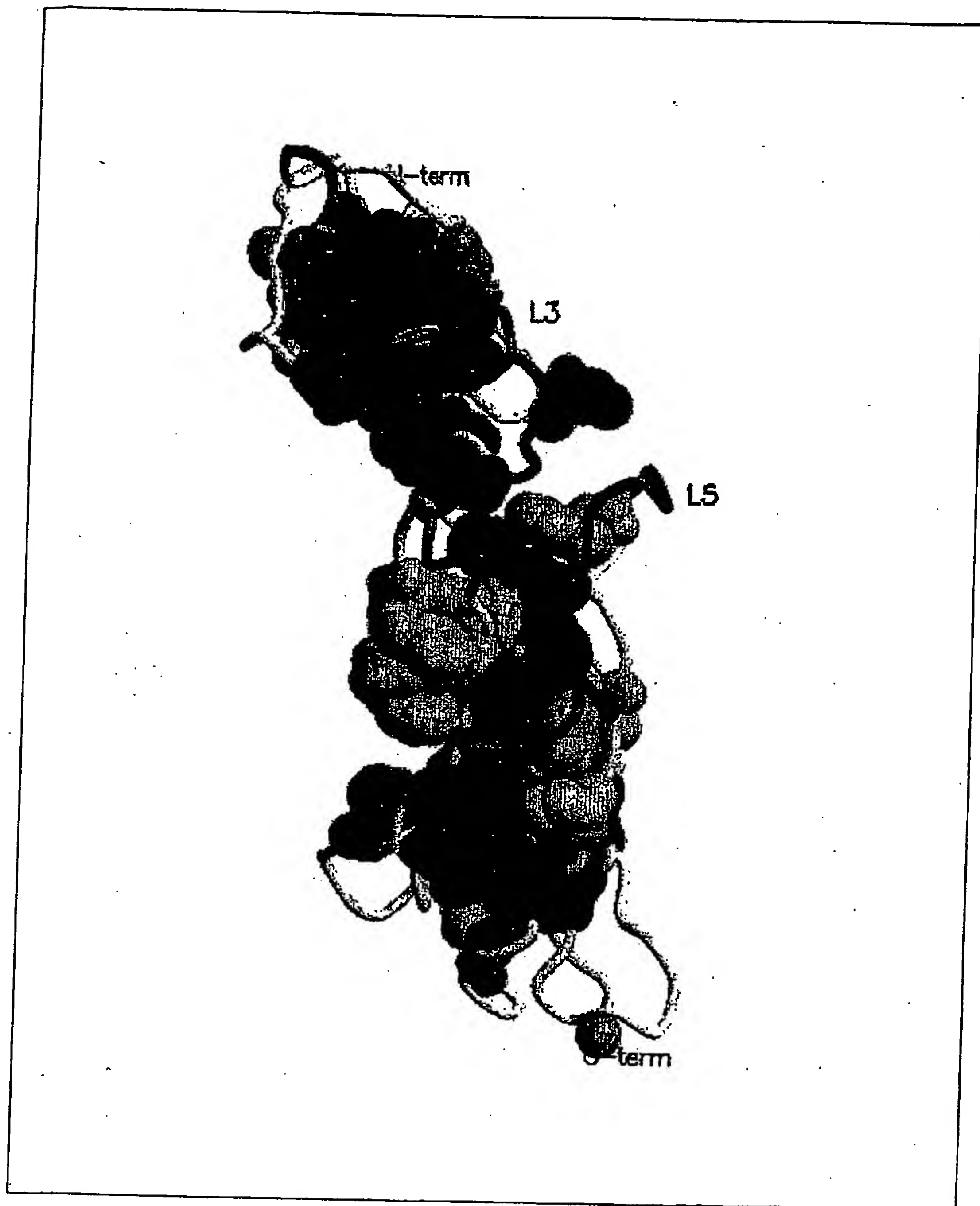


Figure 6(d)

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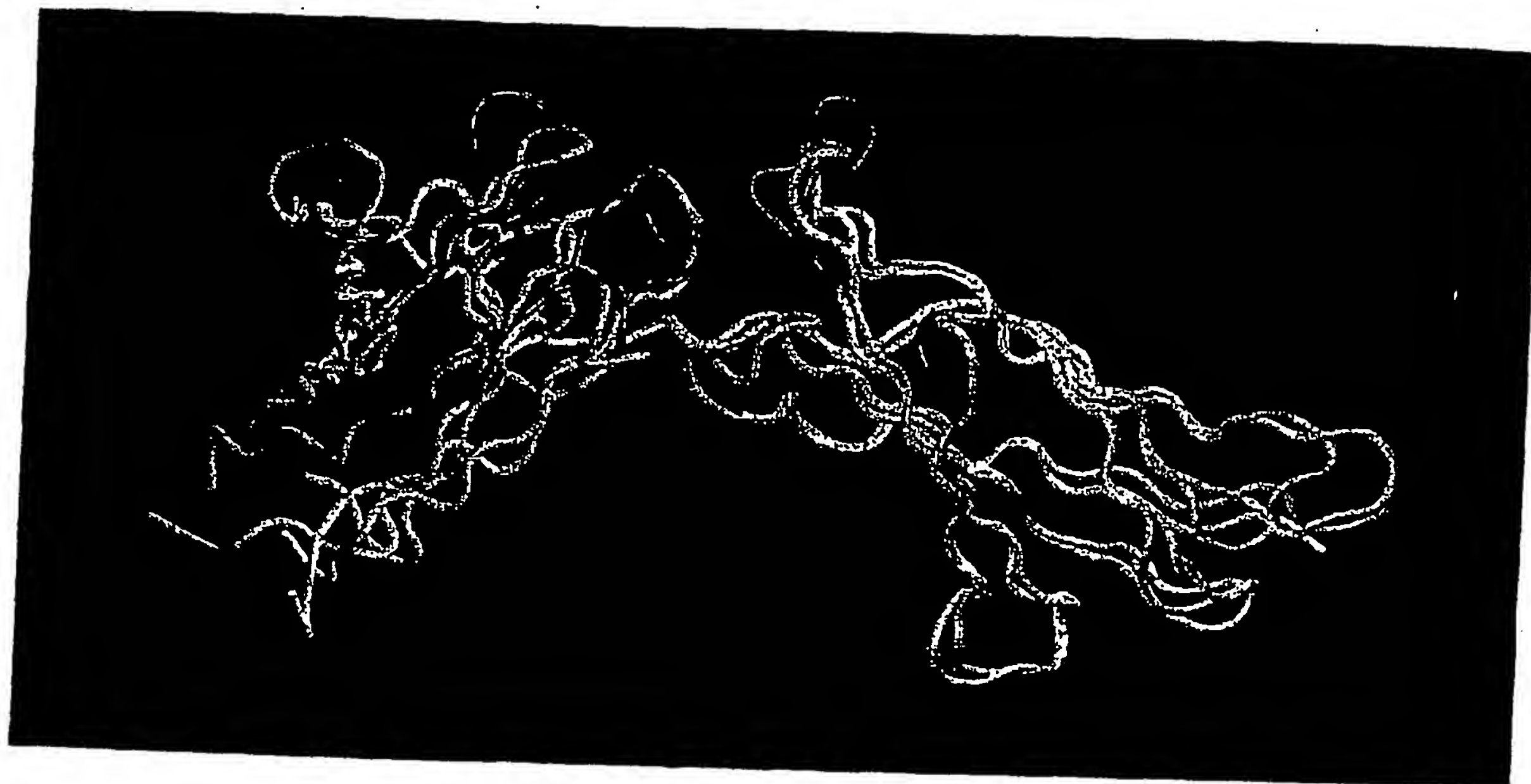


Figure 7

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